

MV megavolt
 M_v bearing friction torque due to hydrodynamic fluid friction
 n pinion speed; load life exponent (experimentally based, with consensus values published in the bearing standards; typically, $n = 3$ for ball bearings and $n = 10/3$ for roller bearings); number of triangles in regular polygon; independent contact points conducting in parallel; bearing speed
N newton
 N number of cycles; normal solution; angular velocity of cylindrical contact; bearing speed; normal force
NA numerical aperture
NASA National Aeronautics and Space Administration
NBS National Bureau of Standards (former name of NIST)
NDE nondestructive evaluation
NER erosion resistance number
 n_i inner ring speed
NIST National Institute of Standards and Technology
nm nanometer
 n_m cage speed (rolling-element orbital speed)
NMMA National Marine Manufacturers Association
 n_o outer ring speed
No. number
 N_0 rationalized incubation period
NOR incubation resistance number
NPSH net positive suction head
NPSHA available net positive suction head
NPSHR required net positive suction head
 n_{RE} ball or roller speed about its own axis
ns nanosecond
NSp not specified
 $N(\Delta)/N_{cat}$ relative life factor
 N_{mean} fatigue life when surface traction equals zero
Oe oersted
OECD Organisation for Economic Cooperation and Development
OFD oxyfuel detonation (spray)
OFF oxyfuel powder (spray)
OFW oxyfuel wire (spray)
OMCVD organo-metallic chemical vapor deposition
ORNL Oak Ridge National Laboratory
OSHA Occupational Safety and Health Administration
oz ounce
P page
 P pressure; hydrostatic pressure acting on the surface
 P^* local asperity contact pressure; equilibrium vapor pressure at an evaporant surface
 \bar{P} average (bulk) hydrodynamic pressure
P pearlite

P specific load or unit load; pressure; transmitted power
 P_a absolute ambient pressure
 \bar{P}_a average (bulk) asperity contact pressure
Pa pascal
PA plasma arc (spray); prealloyed; polyamide
PACVD plasma-assisted chemical vapor deposition
PAN polyacrylonitrile
PAO polyalphaolefin
PAPVD plasma-assisted physical vapor deposition
PBT polybutylene terephthalate
PCD polycrystalline diamond
PCV positive crankcase ventilator
PDF probability density function
Pe Peclet number
PEEK polyetheretherketone
PEI polyetherimide
PEK polyetherketone
PEP passive extreme pressure
PES polyether sulfone
PETN pentaerithritol tetranitrate
PETP polyethylene terephthalate
PFPE polyperfluoroalkylether
pH negative logarithm of hydrogen-ion activity
 P_H maximum Hertzian contact pressure
PH precipitation hardenable
 P_H hardness; Brinell pressure
PHL plastrohydrodynamic lubrication
 p_i pocket pressure in hydrostatic bearing
PKA primary knock-on atom
PLP percent of large particles
 P_m flow pressure or hardness of material
PM permanent mold
P/M powder metallurgy
PMMA polymethyl methacrylate
 P_N nominal normal stress on contact patch
 P_0 yield pressure
POD pin on disk
POF pin on flat
POM polyoxymethylene
 P_{or} static equivalent radial load
POR pin sliding against the cylindrical surface of a rotating ring
ppb parts per billion
ppba parts per billion atomic
ppm parts per million
ppmm parts per million by mass
PPS polyphenylene sulfide
ppt parts per trillion
PSD power spectral density
psi pounds per square inch
psia pounds per square inch absolute
psig gage pressure (pressure relative to ambient pressure) in pounds per square inch

PSII plasma-source ion implantation
PSZ partially stabilized zirconia
PTA plasma transferred arc
PTFE polytetrafluoroethylene
 P_u fatigue load limit
PVC polyvinyl chloride
PVD physical vapor deposition
PVDF polyvinylidene-difluoride
 q heat flux distribution; oil flow rate
 Q thermal energy generated per unit time
 q_{av} average heat flux distribution
 \bar{Q}_c contact stress
 Q_{gen} heat generation
 Q_i rate of heat supplied to body i
 r radius; radial distance of receiver from source; resistivity
R roentgen
 R radius; gas constant; reliability expressed in terms of percent survival; resistance
 \mathbf{R} force vector
 r_0 relative radius at an area before wear
 R_0 surface radius with lubricant film
 r_1 radius of surface 1 at area before wear
 r_2 radius of surface 2 at area before wear
 r_i radius of rolling body I
 r_{II} radius of rolling body II
 R_a surface roughness in terms of arithmetic average
 RA reduction in area
 r_B bushing radius
RB reaction bonded
RCF rolling contact fatigue
RCW rolling contact wear
RDX cyclotrimethylene trinitramine
 R_e equivalent radius of curvature; rationed erosion rate
RE rare earth
Ref reference
REF relative erosion factor
rf radio frequency
RH relative humidity
RIP reactive ion plating
rms root mean square
 R_n neutral radius
 R_p single predominant peak height; leveling depth
rpm revolutions per minute
 R_{pm} mean height of highest peaks on five adjacent sampling lengths; average leveling depth
RPOF reciprocating pin on flat
 R_q rms (root mean square) roughness
R & O rust and oxidation inhibited
 r_s shaft radius
RS reactive sputtering
 R_{sk} skew roughness
RSOF reciprocating, spherically ended pin on a flat surface